

41. The method of claim 29, wherein the level of nucleic acid is determined by contacting the cell with a nucleic acid molecule of any one of claims 1-4 or fragment thereof.
42. The method of claim 41 wherein the nucleic acid molecule or fragment thereof is labeled.
43. The method of claim 42, wherein the label is a radiolabel.
44. The method of claim 29, wherein the nucleic acid is DNA or RNA.
45. The method of claim 28, wherein the normal cell is a human cell.
46. The method of claim 28, wherein the test cell is the transformed cell of claim 16.
47. The method of claim 46, wherein the transformed cell is selected from the group consisting of HEK293 cells, CHO cells, NIH 3T3 cells, BHK cells and PAE-PDGF-R cells.
48. The method of claim 29, further comprising identifying a mutation in the p70 $\beta^{S6k}$  nucleic acid sequence.
49. The method of claim 28, further comprising contacting the cell with an agent that modulates the level of expression of a nucleic acid encoding a p70 $\beta^{S6k}$  protein in the cell.
50. The method of claim 28, wherein the test cell is a human cell.
51. The method of claim 29, further comprising comparing the level of a nucleic acid encoding a p70 $\beta^{S6k}$  protein in the test cell or in the normal cell to the level in a control cell.
52. The method of claim 51, wherein the control cell does not express p70 $\beta^{S6k}$  protein.
53. The method of claim 51, wherein the control cell expresses an activated p70 $\beta^{S6k}$  protein.

54. The method of claim 53, wherein the nucleic acid encoding the activated p70 $\beta^{S6k}$  protein comprises at least one substitution or deletion at a position corresponding to nucleotides 1277-1279 of SEQ ID NO: 1.

55. A method of producing a p70 $\beta^{S6k}$  polypeptide, comprising culturing the cell of claim 16 under conditions under which the polypeptide is expressed.

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